

National Emission Standards for Hazardous Air Pollutants for
Reciprocating Internal Combustion Engines (RICE Rule) Training Module
40 CFR 63 Subpart ZZZZ
Script- Major Source New Emergency Engine ≤500 Horsepower
(Except 4-Stroke Lean Burn Engines ≥250 Horsepower)

NARRATOR:

[Slide 2:]

Welcome to the Connecticut Department of Energy and Environmental Protection's Online Training for the National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines, also known as the RICE Rule!

This tool is designed to help owners and operators of reciprocating internal combustion engines, also known as RICE, determine their requirements under 40 CFR Section 63, subpart ZZZZ. By answering the successive questions, your specific requirements have been estimated. Please note that they may not be complete, and refer any questions to your local authority.

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We have established that you own or operate a new emergency engine, less than or equal to 500 horsepower, located at a major source (that is not a 4-stroke lean burn engine greater than or equal to 250 horsepower). Now, let's discuss your requirements.

In order to comply with this rule, you must meet all applicable New Source Performance Standards Requirements and State emergency engine requirements.

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The following constitute the compliance requirements for your engine to be considered an emergency engine:

- There is no limit on hours of operation for emergency service (for example, in the case of a hurricane or ice storm).
- You may operate the engine up to 100 hours per year for:
 - Maintenance checks and readiness testing, as long as the tests are recommended by federal, state, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. You can petition EPA for additional hours to be used for maintenance checks and readiness testing. However, a petition is not necessary if you keep records showing that federal, state, or local standards require maintenance and testing of the engine in excess of 100 hours per calendar year.
 - Emergency Demand Response
 - Periods during which there is a deviation of voltage or frequency of 5% or more below standard voltage or frequency.
- You may operate up to 50 hours per calendar year during non-emergency situations. However, the 50 hours cannot be used for peak shaving, non-emergency demand response, income generation to supply power to an electric grid, or as part of any financial arrangement with a separate entity unless **all** of the conditions shown here are met. These 50 hours will be counted as part of the 100 hours per calendar year for maintenance, testing and demand response.

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If an emergency engine operates for more than the allowable hours for non-emergency purposes, it will need to meet all non-emergency engine requirements. Engines located in Connecticut must comply with the Connecticut emergency engine requirements.

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Starting in 2015, if you operate, or commit to operate, more than 15 hours annually as part of an emergency demand response program or for local reliability criteria, *and* your engine is greater than 100 horsepower, you must:

- Submit an annual report each year. The report must contain:
 - The address where the engine is located
 - The date of the report
 - The beginning and ending dates of the reporting period
 - The engine site rating and model year
 - The latitude and longitude of the engine in decimal degrees reported to the fifth decimal place
 - Hours operated for Emergency Demand Response. These records should include the date, start time, and end time for engine operation.
 - Number of hours the engine is contractually obligated to be available for Emergency Demand Response.
 - Hours spent operating to supply power as part of a financial arrangement with another entity. These records should include the date, start time, and end time of engine operation, the entity that dispatched the engine, and the situation that required the dispatch.
 - If no deviations occurred from the fuel requirements that apply to the engine, a statement indicating so.
 - Lastly, if there were any deviations, information on the number of deviations, cause, and the corrective actions taken.
- The first report will cover calendar year 2015, and is due on March 31st, 2016.
- The annual report will be required to be submitted electronically. The form for the report can be found in the “Compliance and Emissions Data Reporting Interface,” which can be accessed through EPA’s Central Data Exchange. Follow the link provided here if you would like to visit EPA’s Central Data Exchange.
- Please take note that engines committing to run 15 hours or less on an annual basis for emergency demand response that are not used for local reliability criteria do not have the reporting requirement.

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Now, we will discuss the Connecticut Emergency Engine Requirements. According to the Regulations of Connecticut State Agencies Section 22a-174-22(a)(3), an emergency engine provides mechanical or electrical power only during testing and scheduled maintenance, during an actual emergency, or in accordance with a contract ensuring electricity for use within the State during an OP 4, Step 6 event. An engine for which the owner or operator is party to any other agreement to sell electrical power from such engine to an electricity supplier, or otherwise receives any reduction in the cost of electrical power for agreeing to produce power during periods of reduced voltage or reduced power availability is **not** considered an emergency engine in the State of Connecticut.

Engines operating under Sections 22a-174-3b and 3c of the Regulations of Connecticut State Agencies are subject to additional requirements.

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This table shows a comparison of federal and State of Connecticut emergency engine requirements. Take note that engines operating under Section 3b must limit emergency operation to 300 hours per year, and must limit nongaseous

fuel consumed by the engine to 0.0015% sulfur content, dry basis. Engines operating pursuant to Section 3c have no limit on emergency hours of use or fuel sulfur content; however, the facility's fuel purchases are very limited.

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You are subject to the CI NSPS, listed in 40 CFR part IIII, if you own or operate a compression ignition engine that was constructed after July 11th, 2005 **and** manufactured after April 1st, 2006 (or July 1st, 2006 for a fire pump engine). For the purposes of this rule, the date that construction commences is the date the engine is *ordered* by the owner or operator. You are also subject to the CI NSPS if you own or operate a compression ignition engine that was modified or reconstructed after July 11th, 2005.

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If you are subject to the CI NSPS, you must meet the following requirements:

- For emission limits, operating limits, testing requirements, and monitoring requirements, please refer to the table listed later in this module.
- All standards must be met for the life of the engine.

As of October 1st, 2010, you must use ultra low sulfur diesel for engines having a displacement of less than 30 liters per cylinder. You may use up any diesel fuel acquired prior to October 1st, 2010 that does not meet the requirements for nonroad diesel fuel.

If your engine has a displacement greater than or equal to 30 liters per cylinder, you must use diesel fuel having a maximum per-gallon sulfur content of 1,000 parts per million as of June 1st, 2012.

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If you are subject to the CI NSPS, you must also meet the following requirements:

- If you own or operate a 2007 model year or later engine with a displacement less than 30 liters per cylinder or a fire pump engine that is a 2008 through 2011 model year or later, depending on engine size, you must:
 - Purchase a certified engine
 - Install, configure, operate, and maintain the unit in accordance with the manufacturer's written instructions and procedures. Performance testing is not required. Note that you can operate in a manner other than that which the manufacturer has recommended; however, you must then complete a performance test to demonstrate compliance.
- If your engine is not required to be certified, you must employ one of the following methods for demonstrating compliance:
 - Purchase a certified engine, or
 - Keep records of a performance test conducted on a similar engine, or
 - Keep records of engine manufacturer data indicating compliance, or
 - Keep records of control device vendor data indicating compliance, or
 - Conduct an initial performance test.
- If your engine has a displacement of 30 liters per cylinder or greater, you must complete an initial performance test and continuously monitor the operating parameters.

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Next, we will discuss your recordkeeping and reporting requirements. You must install a non-resettable hour meter and record the engine's hours of operation. If your engine is equipped with a diesel particulate filter, you must install a backpressure monitor to notify when the high backpressure limit is approached and keep records of corrective actions taken after the backpressure monitor has given this notification.

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Please study this table to determine your applicable emission standards, importing and installing requirements, compliance requirements, testing requirements, and general requirements.

[Slide 14:]

You are subject to the SI NSPS, listed under 40 CFR 60 subpart JJJJ, if you own or operate an emergency spark ignition engine which was constructed after June 12th, 2006 **and** is either: greater than 25 horsepower and manufactured on or after January 1st, 2009 or less than or equal to 25 horsepower and manufactured on or after July 1st, 2008. For the purposes of this rule, the date that construction commences is the date the engine is ordered by the owner or operator. You are also subject to the SI NSPS if you own or operate a spark ignition engine that was modified or reconstructed after June 12th, 2006.

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If your engine is subject to the SI NSPS, you must meet the following requirements:

- For applicable emission limits, operating limits, testing requirements, and monitoring requirements, please refer to the table listed later in this module.
- You must meet all standards for the life of the engine.

Now let's discuss your fuel requirements. If your engine runs on gasoline, the gasoline must comply with the sulfur limit of 80 parts per million per gallon.

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If you have a certified engine:

- You must install, operate, and maintain the unit in accordance with the manufacturer's written instructions
- If you do not adhere to the manufacturer's instructions and your engine is greater than or equal to 100 horsepower, you must keep a maintenance plan and maintenance records, and operate the engine in accordance with good air pollution control practices. Failure to adhere to the manufacturer's instructions would also result in the requirement to perform an initial performance test. You are not required to conduct subsequent performance testing unless the stationary engine is rebuilt or undergoes major repair or maintenance.

If your engine is not certified and is greater than 25 horsepower:

- You must keep a maintenance plan; and
- Conduct an initial performance test. You are not required to conduct subsequent performance testing unless the stationary engine is rebuilt or undergoes major repair or maintenance.

If your emergency engine is subject to the SI NSPS, install a non-resettable hour meter to record engine hours of operation. You are only required to install the meter if your engine is not certified to the non-emergency engine standards **and** is either:

- 500 horsepower and built on or after July 1st, 2010
- greater than or equal to 130 horsepower and built on or after July 1st, 2011, **or**
- less than 130 horsepower and built on or after July 1st, 2008.

All engines subject to the SI NSPS are required to keep the following records:

- Documentation of certification (for example, the EPA Certificate of Conformity)
- Records of engine maintenance
- Records of hours of operation

You must submit an Initial Notification if you own or operate a non-certified engine that has a site rating of 500 horsepower. A Notification of Intent to Conduct Performance Testing must be submitted 30 days prior to a performance test. Results of performance testing must be submitted within 60 days of the test.

[Slide 17:]

This plate, mounted on an engine, shows proof of engine certification.

[Slide 18:]

A certified engine will probably have an EPA Certificate of Conformity. In case you are not familiar with an EPA Certificate of Conformity, here's what it looks like.

[Slide 19:]

Please study this table to determine your applicable emission standards, importing and installing requirements, compliance requirements, testing requirements, reporting requirements, and general requirements.

[Slide 20:]

You must be in compliance with all applicable requirements by the date shown here.

[Slide 21:]

All notifications and reports should be sent to EPA Region 1 at the address shown here.

[Slide 22:]

If you would like more information about the RICE rule, please visit the EPA RICE Compliance web page at the address provided. This site provides resources such as Q and A documents, fact sheets, sample notification forms, and recordings of webinars, all of which are designed to help you comply with this rule.

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Let's summarize your requirements under this rule.

- You must meet all applicable NSPS requirements and State emergency engine requirements.
- For engines located in Connecticut, there is no limit on the number of hours that may be used for emergency operation, unless the unit is subject to Section 22a-174-3b or 3c of the Regulations of Connecticut State Agencies.
- The engine cannot be used as part of any other agreement or financial arrangement with another entity
- The engine can only operate during emergencies, maintenance, scheduled testing, or during an OP-4, Step 6 event.
- If you are operating the engine under RCSA Section 22a-174-3b, you must limit emergency operation to 300 hours per year. Additionally, any nongaseous fuel consumed by the engine shall not exceed sulfur content of 0.0015%, dry basis.
- If you are operating the engine under RCSA Section 22a-174-3c, there is no restriction on the hours of use or fuel sulfur content. However, total facility purchases of fuel are extremely limited.

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You must comply with all CI or SI NSPS requirements, as applicable.

- Under the NSPS, there is no limit for emergency hours of operation.
- 100 hours per year are allowed for maintenance checks and readiness testing
- Demand response for Energy Emergency Alert Level 2 situations; and
- Responding to situations when there is at least a 5% or more change in voltage.

- 50 of the 100 hours can be used for non-emergency situations
 - These 50 hours cannot be used for peak shaving, non-emergency demand response, or to supply power as part of a financial arrangement with another entity *unless* the engine meets all specified requirements.
- Starting in 2015, if the unit operates more than 15 hours per calendar year for emergency demand response or is used for local reliability criteria, you must submit annual reports. The first report must cover calendar year 2015 and is due March 31st, 2016.
- If an emergency engine operates in excess of the allowable hours for non-emergency purposes, it will need to meet all non-emergency engine requirements.
- Your engine must be in compliance with all requirements of this rule by the date shown on screen.